

by a retainer ring 144 which is suitably secured to the rigid plate by bolts or rivets 145. A small stiffening plate or manually actuatable means 146 of metal, plastic or the like is bonded to the upper surface of the diaphragm for the purpose of supplying strength and rigidity to the diaphragm. A conventional flap valve 148 covers an air inlet 149 in the rigid plate 140 to allow air to enter the diaphragm but not exit through the inlet. Both the rigid plate 140 and the triangular plate 130 are provided with central apertures which are interconnected by a small tube 148. A conventional ball-type check valve 150 is provided in the lower end of the tube to permit air to pass from the diaphragm into the ball occupying chamber 127 but not to exit therefrom.

In the use of this embodiment, the balls are placed in the cups 120 and the container top 128 is lowered into place on the studs 126. After the wing nuts 136 are tightened to effect an airtight seal, the diaphragm is flexed a few times, as by the user stepping on plate 146, to pump air into the ball occupying chamber 127. The pumping may be continued until the desired pressure is obtained.

The embodiment shown in FIG. 7 shows a container means including a cylindrical container 152 having a cylindrical side wall 154 and a threaded end enclosure 156. A gasket 158 is placed between the end closure and the cylindrical side wall to effect an airtight seal. The upper end of the cylindrical container 152 terminates in an inner peripheral flange 160 that forms a central opening 162. A ring 164 is threaded over the upper end of the cylindrical container and is provided with a peripheral lip 166 in which is seated a rubber or like seal ring 168. The air pressurization means of this embodiment of the invention includes a collapsible bellows 169 bonded at its lower end to the outside surface of the ring 164. The bellows may be made of any suitable flexible, air impermeable material such as rubber, molded plastic or the like and may be resilient if desired.

Manually actuatable means for the bellows comprises a rigid disk 170 bonded to the upper edges of the bellows 169, with an integrally formed upright channel member 172. The opposite ends of the channel receive pivot pins 176 on which are pivotally mounted a pair of clips 178. Each clip has an inwardly upturned end 180 that is latchable, when the bellows is compressed, beneath a catch 182 on each side of the cylindrical container 152 for locking the bellows in its compressed position.

The plurality of filler elements 190, slightly spaced from one another as at 194, occupy substantially all of the air space around the balls B and define a ball occupying chamber 195. The filler elements 190 are preferably somewhat loose fitting so that air may pass between the balls and the fillers and around the radial outer surfaces of the fillers to pressurize the entire container.

In the use of this embodiment the balls B and filler elements 190 are placed in the container 152 through either end thereof. After threaded replacement of either ring 164 or the end enclosure 156, depending on which was removed, the bellows 169 is collapsed by pushing downwardly on the disk 170 to force air into the ball occupying chamber 195 and the clips 178 are then fastened beneath the catches 182.

I claim:

1. Self-contained storage apparatus for tennis balls and the like, comprising:

(a) container means providing a ball occupying chamber, configured to have a relatively small volume of air surrounding a plurality of balls;

(b) air pressurization means structurally integrated with said container means and having a variable volume air chamber with a maximum volume substantially greater than the volume of air surrounding the balls in the container means, such variable volume air chamber being in air flow communication with the ball occupying chamber;

(c) means enabling placement of the balls in the con-

tainer means a closure of the ball occupying chamber with the variable volume air chamber at substantially its maximum volume and with the air in said chambers at substantially atmospheric pressure; and

(d) said air pressurization means including manually actuatable means for reducing the volume of the variable volume air chamber and thus increasing the air pressure in the ball occupying chamber.

2. The apparatus defined by claim 1, wherein said air pressurization means is provided with flexible walls.

3. The apparatus defined by claim 2, wherein said flexible walls are in the form of the bladder.

4. The apparatus defined by claim 2, wherein said flexible walls are in the form of a diaphragm.

5. The apparatus defined by claim 2, wherein said flexible walls are in the form of a bellows.

6. The apparatus defined by claim 1, wherein said container means includes filler elements configured to substantially fill the space around the balls so as to form said ball occupying chamber.

7. The apparatus defined by claim 1, said container means having outer wall means in the form of spherical cups which define said ball occupying chamber.

8. Apparatus defined by claim 1, said container means having:

(a) an open end for inserting the balls into said ball occupying chamber;

(b) a closure member having an end surface for closing said open end and an aperture communicating with said air pressurization means, said enclosure and said air pressurization means being integrally formed as a single unit.

9. The apparatus defined by claim 1, wherein said container means has:

(a) two spaced ends, one of said ends having a closure surface provided with an aperture in communication with said air pressurization means and said air pressurization means being integrally connected to said closure surface, and said other end having a removable enclosure for inserting tennis balls into said ball occupying chamber.

10. The apparatus defined by claim 2, wherein said flexible wall air pressurization means and said container means form a unitary hollow cylinder, a part of which defines said ball occupying chamber, and wherein the air pressure in said ball occupying chamber is increased to the desired pressure by a single partial stroke of said flexible wall air pressurization means.

11. The apparatus defined by claim 2, further including latch means for holding said manually actuatable means in an actuated position wherein the ball occupying chamber remains pressurized.

12. The apparatus defined by claim 4, wherein said air pressurization means includes valve means for controlling the passage of air between said diaphragm and said ball occupying chamber.

13. The apparatus defined by claim 2, wherein said air pressurization means include a compression cylinder confining an air impervious bladder, the interior of said bladder communicating with the interior of said ball occupying chamber.

14. The apparatus defined by claim 13, wherein said manually actuatable means includes:

(a) at least two toggle arms pivotally connected alongside said compression cylinder; and

(b) at least two latch arms pivotally connected to said toggle arms for reciprocating said toggle arms and selectively locking them against movement.

15. The apparatus defined by claim 14, further including attachment means securable over said container means for supporting said latch arms.

16. The apparatus defined by claim 15, wherein said container means is a conventional cylindrical can of the type in which tennis balls are marketed.